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1987 BUDGET GUIDE

ESTIMATED PRICES for CROP OPERATING INPUTS and CAPITAL INVESTMENT ITEMS

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1987 Budget Guide

Contents

	<u>Page</u>
Introduction - - - - -	1
Crop Operating Inputs	
Seed - - - - -	2
Fertilizer and Lime- - - - -	2
Pesticides - - - - -	3
Other Items - labor, supplies, interest, etc.- - - - -	4
Capital Investment Items	
Power and Field Equipment	
Tractors - - - - -	5
Trucks - - - - -	5
Primary Tillage Equipment- - - - -	5
Secondary Tillage Equipment- - - - -	6
Planting Equipment - - - - -	6
Other Growing Equipment- - - - -	7
Harvesting Equipment - - - - -	7
Transport Equipment- - - - -	8
Dairy Structures and Equipment - - - - -	10
Horizontal Silos - - - - -	11
Tower Concrete Silos - - - - -	12
Machine Storage Buildings - - - - -	13
Manure System Components- - - - -	14
Index of Prices Paid by New York Dairy Farmers- - - - -	15

1987 Budget Guide

Introduction

Anyone concerned with controlling production costs for farm enterprises knows the importance of planning ahead. The need to control costs becomes more important than usual in times of low commodity prices. Financial planning for the year ahead should include a degree of budgeting to determine what crop inputs and capital purchases will be needed.

This publication includes a compilation of prices acquired from several vendors. It is intended to serve as a guide for farm operators and those who work with them to use in the budgeting process. Most prices shown herein are averages of several samples obtained in early 1987. However, prices for dairy structures and equipment were obtained in 1986 but are considered reasonable for general planning purposes.

Prices vary - sometimes widely - between vendors and depend on options, quality, and other factors. The producer should recognize this and should consider convenience and service as well as price in the purchase of any item. For crop inputs it is wise to consider carefully the quantity needed per acre based on cropping history, soil tests, and a realistic yield expectation with normal weather patterns. For capital purchases it is important to control fixed costs for equipment and structures by spreading the use over a large number of units. Idle investments are expensive.

The prices noted for tractors, trucks, and field equipment are averages of list prices for each item equipped as normally purchased. Accompanying notes are used in some cases to further identify features of a particular capital item.

A table of index prices paid by New York dairy farmers is included to provide a perspective of several years. The indices indicate how the major cost items for a dairy farm business have changed in recent years and provide an estimate of how they may be expected to change in 1987.

CROP OPERATING INPUTS

<u>Item</u>	<u>Average price</u>	<u>Unit</u>
<u>Seed:</u>		
Alfalfa	\$2.76	pound
Timothy	0.99	pound
Corn	66.00	80-K unit
Oats	4.40	bushel
Wheat - winter	6.91	bushel
spring	8.60	bushel
Red kidney beans	0.60	pound
Soybeans	13.00	bushel
<u>Lime:</u> Spread, 72-95% ENV	23.75	ton
<u>Fertilizer:</u>		
Nitrogen	0.18	pound
Phosphorus	0.19	pound
Potassium	0.11	pound
30-32% liquid N	101.25	pound
33.5-0-0 ammonium nitrate	160.00	ton
46-0-0 urea	164.00	ton
82-0-0 anhydrous ammonia	197.50	ton
0-46-0	168.10	ton
0-0-60	113.38	ton
11-52-0 MAP	205.33	ton
18-46-0 DAP	197.94	ton
6-24-24	155.50	ton
10-20-20	154.40	ton
15-15-15	148.05	ton

CROP OPERATING INPUTS continued

<u>Item</u>	<u>Average price</u>	<u>Unit</u>
<u>Pesticides:</u>		
<u>Herbicides:</u>		
2,4-D	10.05	gallon
2,4-DB	15.62	gallon
Atrazine 4L	8.37	gallon
Banvel	57.61	gallon
Bicep	18.85	gallon
Bladex 4L	18.71	gallon
Dual 8E	49.51	gallon
Eptam 7E	23.46	gallon
Eradicane	24.35	gallon
Lasso	20.94	gallon
Lorox L	57.45	gallon
Paraquat	48.54	gallon
Princep 4L	12.65	gallon
Prowl	24.04	gallon
Roundup	67.83	gallon
Sencor 75WP	22.83	gallon
Treflan	29.61	gallon
Valpar	41.12	gallon

CROP OPERATING INPUTS continued

<u>Item</u>	<u>Average price</u>	<u>Unit</u>
<u>Insecticides:</u>		
Corn/bean seed treatment	0.58	acre
Counter	1.50	pound
Diazinon 14G	1.28	pound
Dyfonate 20G	1.79	pound
Furadan 15G	1.48	pound
Lorsban 15G	1.42	pound
Malathion 5E	18.12	gallon
Methoxachlor 2E	13.34	gallon
Sevin	2.03	pound
Thimet 20G	1.34	pound
<u>Fungicides:</u>		
Benlate 50WP	13.63	pound
<u>Other Operating Inputs:</u>		
Labor - regular	7.15	hour
part-time, seasonal	5.10	hour
Interest	10.2	percent
Fire insurance, RE & chattel	5.50	per \$1000 coverage
Baling - twine	18.50	9000 ft bale
wire	31.61	cwt. (6500 ft)
Fuel - diesel, field	0.75	gallon, w/o tax
road	0.98	gallon
gas, field, regular	0.80	gallon, w/o tax
road, unleaded	0.95	gallon
LP gas, propane	0.75	gallon

CAPITAL PURCHASES

<u>Item</u>	<u>Average List Price</u>
<u>Tractors</u> - diesel and equipped as normally purchased, without cab, pto hp.	
12 hp (gas), lawn & garden, hydro	\$ 3,800
25 hp	9,500
40 hp	15,850
50 hp	22,350
60 hp	24,700
60 hp w/front wheel assist	29,750
80 hp	28,250
80 hp w/front wheel assist	34,050
100 hp	40,750
100 hp w/front wheel assist	48,250
120 hp	39,200
120 hp w/front wheel assist	46,750
140 hp	52,150
175 hp 4WD, with cab	75,650
Tractor cab w/air	6,000
<u>Trucks</u>	
Pickup - 3/4T, standard V8, 2WD	11,200
Large road truck - 400 cu. in. gas, 5 speed trans., 18 ft. box w/hoist, heavy tires	25,000
<u>Primary Tillage Equipment</u>	
Moldboard plow - auto reset, semi-mounted	
4-16"	6,500
5-16"	7,550
5-18"	10,450
6-18"	12,700

CAPITAL PURCHASES continued

<u>Item</u>	<u>Average List Price</u>
<u>Primary Tillage Equipment</u> continued	
Chisel plow - w/front disc	
11 ft, 7 shank	7,950
13 ft, 9 shank	9,350
Offset disc - 13 ft, 26" disc	10,500
<u>Secondary Tillage Equipment</u>	
Disc - 14 ft	7,450
20 ft	13,250
Drag - spring tooth harrow	
16 ft	2,400
20 ft	3,100
Cultimulcher - 12 ft	6,400
15 ft	7,550
Field cultivator - 16-18 ft	4,600
Cultipacker - 12 ft	1,700
14 ft	2,750
30 ft	7,500
Land roller - 24 ft	3,200
Ridge cultivator (builder) - 6 row	7,000
<u>Planting Equipment</u>	
Drill - w/seeder, dry fertilizer	
15 x 7"	6,000
21 x 7"	7,650
24 x 7"	9,500
Cultipacker seeder - 10 ft	3,200
12 ft	4,600
No-till seeder	11,300

CAPITAL PURCHASES continued

<u>Item</u>	<u>Average List Price</u>
<u>Planting Equipment</u> continued	
Corn planter - plateless w/dry fertilizer	
4 row	10,050
6 row	14,450
8 row	19,150
No-till plateless w/dry fertilizer	
4 row	11,350
6 row	15,150
8 row	21,200
<u>Growing Equipment</u>	
Cultivator - 4 row	2,250
6 row	3,150
8 row	4,950
Sprayer - 28 ft, 300 gallons	4,000
40 ft, 500 gallons	5,100
<u>Harvesting Equipment</u>	
Rotary mower - 5 ft	875
Mower conditioner - 9 ft	9,800
12 ft	14,500
Side delivery rake - 9 ft	3,050
Baler w/kicker, mid size	12,450
Large round baler - 5 ft	14,500
Flail chopper - 6 ft	6,600
Forage harvester - pto base unit w/o metal detector	
2 row	13,450
3 row	16,300

CAPITAL PURCHASES

<u>Item</u>	<u>Average List Price</u>
<u>Harvesting Equipment</u> continued	
Windrow pickup head - 5.5 ft	2,450
7.5 ft	3,800
Corn head - 2 row	4,100
3 row	7,600
Snapper head - 1 row	4,400
2 row	7,050
Blower - 4 to 5 ft diameter	3,500
Combine - SP, diesel, 2WD	
3 row power unit	63,350
3 row corn head	10,105
4 row power unit	71,250
4 row corn head	12,500
4 row bean head	12,000
13 ft grain head	6,200
6 row power unit	88,500
6 row corn head	17,500
6 row bean head	13,500
15 ft grain head	6,500
4 wheel drive option	8,600
Dry bean cutter - 6 row	4,300
Dry bean windrower - 6 row	9,350
Dry bean combine - trailed	35,000
<u>Transport Equipment</u>	
Running gear - chassis w/tires	
8 ton	1,200
12 ton tandem	2,000

CAPITAL PURCHASES

<u>Item</u>	<u>Average List Price</u>
<u>Transport Equipment</u> continued	
Bale wagon w/8T gear, 4 tires	1,650
Round bale mover - 3 pt hitch	475
Flat bed transport	3,100
Side unloading forage wagon	
heavy gear, 6 tires, roof	10,050
Dump wagon - hydraulic	
heavy gear, tires, roof	8,200
Gravity grain wagon	
300 bu, 8T gear	2,150
Manure spreader - hyd gate	
225 bu ±	6,150
350 bu ±	9,500
Slurry spreader	
2,400 gallons	12,250
Feed mixer wagon w/scales	
300-350 bu	20,500

DAIRY BARN AND MILKING COMPLEXES FOR TWO HERD SIZES
ESTIMATED COSTS
NEW YORK, 1986

<u>Item</u>	<u>125 Cows</u>	<u>250 Cows</u>
Barn & holding area - includes site prep & all concrete work; stall beds concrete	\$ 99,500	\$162,000
Milking center - includes milk room	47,000	58,000
Feed bunk - adequate for herd size	2,300	4,400
Freestalls - metal	5,700	11,300
Mechanical manure scraper	13,000	18,000
Parlor equipment - no feeders	4,800 (D-4)	6,400 (D-6)
Milking system - includes pump, condenser, pipeline, water heater, heat exchanger, etc.	18,000	22,000
Bulk tank - sized for 18,000 pound herd average & 5 milkings	18,400	26,100
Other features:		
Auto takeoffs	4,000	5,800
Weigh meters	7,300	11,000
Crowd gate	2,100	2,500
Plumbing, wiring, etc. - waterers, lighting	10,000	13,000
Well - 200 feet deep, 100 feet of 6" casing with pump installed	<u>3,500</u>	<u>3,500</u>
Total	\$235,600	\$344,000
Per cow	\$1,885	\$1,376

Notes:

1. Vendors were asked to estimate current turnkey costs for the components listed for two herd sizes.
2. Barn complex - four or six rows of freestalls; center feed bunk drive through design; cold, pole construction with attached masonry, insulated parlor and milk house. All barn equipment installed.
3. Excludes feed storage facilities.
4. Data are averages of two to four responses.

Source: 1986 Survey of Vendors, D.P. Snyder, May 1986.

HORIZONTAL SILOS
ESTIMATED COSTS
New York, 1986

Size	Capacity	Cost	
		Total	Per Ton
W x L X H in feet	Tons @ 70% mc	\$	\$
40 x 80 x 8	512	15,532	30
10	672	17,292	26
40 x 100 x 8	640	18,836	29
10	840	21,036	25
50 x 80 x 8	640	17,655	28
10	840	19,415	23
12	1,056	21,175	20
50 x 100 x 8	800	21,345	27
10	1,050	23,545	22
12	1,320	25,745	20
60 x 100 x 8	960	23,854	25
10	1,260	26,054	21
12	1,584	28,254	18
60 x 120 x 8	1,152	27,930	24
10	1,512	30,570	20
12	1,900	33,210	17
80 x 100 x 8	1,280	28,872	23
10	1,680	31,072	18
12	2,112	33,272	16
80 x 120 x 8	1,536	33,720	22
10	2,016	36,360	18
12	2,534	39,000	15

Notes:

- Capacity is within the silo walls and based on the following average densities for various wall heights:
8 foot wall - 40 lbs./cu. ft; 10 ft - 42 lbs./cu. ft.;
12 ft. - 44 lbs./cu. ft.
- Cost includes site preparation at \$0.30 per square foot of floor area.
Floor area includes two full width aprons 15 feet long and reinforcing.
Average cost at \$1.63 per square foot.
Walls are erected and in place with necessary supports, footers, and reinforcing. Average cost at \$5.50 per square foot.
Costs are for silo built within 30 miles of dealer's plant.
- Capacity would be greater and cost per ton lower if average depth of silage exceeded wall height.
- Costs are calculated from data supplied by seven vendors.

Source: 1986 Survey of Vendors, D.P. Snyder, April 1986.

TOWER CONCRETE SILOS AND TOP UNLOADERS
ESTIMATED COSTS
New York, 1986

Silo Size	Capacity	Cost		
		Silo	Per Ton	Unloader
Dia x H in feet	Tons @ 70% mc	\$	\$	\$
16 x 50	260	12,300	47	
60	340	14,400	42) 6,300
18 x 60	430	16,200	38	
70	540	18,600	34) 6,600
20 x 60	530	18,300	35	
70	660	21,100	32) 6,800
22 x 60	640	21,300	33	
70	790	24,500	31) 8,100
24 x 60	760	23,000	30	
70	940	26,900	29) 7,700

Notes:

1. Includes site preparation, foundation, roof, chute, ladder, pipe.
2. Most silo manufacturers contacted do not offer silos larger than 24 feet in diameter.
3. Data for the unloader for the 22' silo is from two dealers. Balance of the data for silos and unloaders is from 5-6 dealers.

Source: 1986 Survey of Vendors, D.P. Snyder, April 1986.

FARM MACHINE STORAGE BUILDINGS
COST ESTIMATES
NEW YORK, 1986

General Specifications of Structure -

- About 3,000 to 5,000 square feet, metal shell, timber column, large end and side doors, passage door, basic wiring, no concrete floor, delivered and erected on prepared site.

- Average cost - about \$6.00 per square foot erected

Site preparation - about 0.30 per square foot

Gravel and concrete - about 2.00 per square foot installed

Total cost \$8.30 per square foot

Source: 1986 Survey of Vendors, D.P. Snyder, April 1986, data from two vendors.

SELECTED MANURE SYSTEM COMPONENTS
COST ESTIMATES*
NEW YORK, 1986

Method of Cleaning Barn		Equipment for Loading Storage		Storage**		Equipment for Agitation & Hauling	
----- Range in Thousands \$ -----							
Tractor Scraper	2-14	Loading Dock	3-6	Earthen	3-7	Pump	6-8
Alley Scraper Gutter Cleaner	5-7	Conveyor Stacker	5-6	Bottom & Ramp (hard surface)	3-6	Agitator	
						Liquid Manure Tanks	6-11
Slotted Floor	11-24	Ram Pump	7-11	Above Grade Steel	30-35	Front End Loader	3-6
Flush	3-8	Liquid Pump (submersible)	6-12	Mono- lithic	21-28	Gravity Load Structure	3-6
		Gravity Struc- ture & Pipe	2-6	Bunker Wood & Concrete	11-18	Conv. Spreader	5-9
		Surface or Subsurface Sluiceways	4-6	Below Slats	16-25	Irrigation	20-30

*100 cows, freestall barn.

**Six month storage (except for earthen which is for one year).

Source: R. Guest, D. Snyder, May 1986.

INDEX OF PRICES PAID BY NEW YORK DAIRY FARMERS
(1977=100)

Item	Weight	1981	1982	1983	1984	1985	1986*	1987**
Feed	.31	141	129	141	141	119	118	118
Purchased animals	.03	243	217	195	170	163	156	158
Fuel & energy	.05	211	209	205	206	204	178	170
Fertilizer	.05	150	149	139	142	134	128	125
Seed	.02	146	157	160	169	169	167	167
Machinery	.18	147	161	172	181	185	185	185
Building & fencing supplies	.08	134	135	138	138	136	136	138
Farm services & rent	.08	137	143	147	149	152	153	155
Agricultural chemicals	.01	111	119	125	128	128	127	126
Interest rates	.07	156	161	145	151	146	143	140
Farm wage rates	.09	140	141	151	158	169	181	182
Taxes	.03	133	142	152	161	176	181	185
Prices Paid, Not Including Assessment		149	148	153	156	150	149	149
Prices Paid, Including Assessment & Promotion Deduction		--	--	159	162	152	155	152

Source: New York Crop Reporting Service, Agricultural Situation and Outlook,
A.E. Ext. 86-35

*Preliminary

**Projected

For 1987, the overall index of prices paid, with the milk assessment excluded, is projected to average the same as 1986. Feed and machinery are likely to exhibit small changes, while fuel and energy, fertilizer, and interest rates are likely to average less in 1987 than 1986. Fuel and energy prices may strengthen during the year, but are not likely to reach beginning of 1986 levels. Purchased animals, building materials, and taxes are projected to exhibit the largest increases.